REMARKS

This Amendment is fully responsive to the non-final Office Action dated May 25, 2011, issued in connection with the above-identified application. Claims 1-17 are pending in the present application. With this Amendment, claims 1, 4-9, 12, 13, 16 and 17 have been amended; No new matter has been introduced by the amendments made to the claims. Favorable reconsideration is respectfully requested.

I. Interview Summary

The Applicants thank Examiner Chokshi for discussing the rejection under 35 U.S.C. 112, second paragraph, on around June 24, 2011. The Examiner indicated that new examination guidelines for U.S. Examiners allow the reading of certain claim limitations under 35 U.S.C. 112, sixth paragraph, even when the claim limitations do not specifically recite "means for" language. In particular, the Examiner noted that independent claims 1 and 12 use the phrase "configure to," in combination with different "units," which allows the claims to be interpreted under 35 U.S.C. 112, sixth paragraph. During the interview, the Examiner suggested amending claims to remove the "configure to" language to avoid an interpretation under 35 U.S.C. 112, sixth paragraph. The Examiner indicated that such amendments would be sufficient to address the rejection under 35 U.S.C. 112, second paragraph.

II. Rejection Under 35 U.S.C. § 112, Second Paragraph

In the Office Action, the Examiner has rejects claims 1 and 12 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, the Examiner alleges that independent claims 1 and 12 use the phrase "configure to," in combination with different "units," which allows the claims to be interpreted under 35 U.S.C. 112, sixth paragraph. Additionally, the Examiner alleges that the structure for the claimed " reproduction unit" and the "communication control unit" are not sufficiently disclosed in the specification.

As noted above, during the interview conducted on around June 24, 2011, the Examiner suggested amending claims 1 and 12 to remove the "configure to" language to avoid an interpretation under 35 U.S.C. 112, sixth paragraph. The Examiner indicated that such amendments would be sufficient to address the rejection under 35 U.S.C. 112, second paragraph.

The Applicants have amended all the claims to remove the "configured to" language from the claims, as suggested by the Examiner. Withdrawal of the rejection to claims 1 an 12 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

III. Claim Objection

In the Office Action, the Examiner objects to claim 13 for minor informalities. Specifically, the Examiner suggests replacing the phrase "[a] content reproduction device corresponding to claim 12" with "[t]he content reproduction device corresponding to claim 12." The Applicants have amended claim 13, as suggested by the Examiner. Withdrawal of the objection to claim 13 is respectfully requested.

IV. Prior Art Rejections

In the Office Action, claims 1, 8 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse (U.S. Publication No. 2002/0183026, hereafter "Naruse") in view of Markman (U.S. Publication No. 2003/022966, hereafter "Markman"), Zhu (U.S. Publication No. 2008/0183767, hereafter "Zhu") and Zhang (U.S. Patent No. 7,133,486, hereafter "Zhang").

The Applicants have amended independent claims 1 and 8 to more clearly distinguish the present invention from the cited prior art. For example, independent claim 1 (as amended) recites the following features:

"[a] content reproduction device that performs streaming reproduction of a content, the device comprising:

a plurality of communication units that receives, in parallel, each of pieces of segmented data of a content transmitted from a content transmission device over a communication path, a part of the pieces of the segmented data of the content being received by one of said plurality of communication units and another part of the pieces of the segmented data of the content being received by another one of said plurality of communication units, each of the pieces of segmented data having a data amount adjusted based on a transmission speed which enables communication…." (Emphasis added).

The features emphasized above in independent claim 1 are similarly recited in independent claim 8 (as amended). Additionally, the features emphasized above in independent claim 1 (and similarly recited in independent claim 8) are fully supported by the Applicants' disclosure (see e.g., Fig. 19 and the corresponding description thereof).

With the present invention (as recited in independent claim 1), communication units receive, in parallel, each of the pieces of segmented data of a content transmitted from a content transmission device over a communication path, wherein a part of the pieces of the segmented data of the content is received by one of the communication units and another part of the pieces of the segmented data of the content is received by another one of communication units. The present invention (as recited in independent claim 1) is believed to be clearly distinguished from the cited prior art in that each of the pieces of segmented data has a data amount adjusted based on a transmission speed which enables communication. The features discussed above with reference to independent claim 1 are similarly recited in independent claim 8.

With the present invention (as recited in independent claims 1 and 8), content is segmented by transmission speed (e.g., bit rate) so that each of the communication units can transmit and receive the segmented pieces of content. The content reproduction device and method of the present invention (as recited respectively in independent claims 1 and 8) is able to achieve streaming reproduction of the content even when the maximum transmission speed of one of the communication units is below the rate of the streaming content.

In the Office Action, the Examiner relies on the combination of Naruse, Markman, Zhu and Zhang for disclosing or suggesting all the features recited in independent claims 1 and 8. However, with the regard to the features noted above in independent claim 1 (and similarly recited in independent claim 8), it appears that the Examiner relies specifically on Markman in ¶[0025], ¶[0041], ¶[0048] and ¶[0085] and Zhang in col. 9, lines 10-59 for disclosing the features of the plurality of communication units, recited respectively in independent claims 1 and 8.

However, the Applicants assert that Markman in ¶[0025], ¶[0041] and ¶[0048] and Zhang in col. 9, lines 10-59 fail to disclose or suggest all the features of the plurality of communication units now recited respectively in independent claims 1 and 8, as amended.

As amended, independent claim 1 now recites:

"…a part of the pieces of the segmented data of the content being received by one of said plurality of communication units and another part of the pieces of the segmented data of the content being received by another one of said plurality of communication units, *each of the pieces of segmented data having a data amount adjusted based on a transmission speed which enables communication*…."

Markman in ¶[0025], ¶[0041], ¶[0048] and ¶[0085] discloses a system for distributing

media signals to subscribers that includes one or more content sources linked to set top boxes by a broadband network. An EPG module displays programming information in various formats, such as a timeline, grid, or the like, allowing a subscriber to easily view upcoming or current programming. Additionally, a media center functions as a centralized reception and distribution center for media signals (e.g., TV signals) within a home; and bookmarks and/or other meta data may be associated with media programs.

As noted above, Markman (i.e., ¶[0025], ¶[0041], ¶[0048] and ¶[0085]) discloses that media signals and media program information are included in a single medium. In other words, segmented pieces of the content (e.g., media signals) refer to data to be segmented only in a predetermined unit so that the data amount of content cannot be dynamically changed.

Nothing in Markman (i.e., ¶[0025], ¶[0041], ¶[0048] and ¶[0085]) discloses or suggests that each piece of segmented data has a data amount adjusted based on a transmission speed which enables communication, as recited in independent claims 1 and 8. With the present invention (as recited in independent claims 1 and 8), the segmented pieces of the content have data amounts adjusted based on a transmission speed. Such a dynamic change of the data amount allows each communication unit to transmit and receive the segmented pieces of the content. No such features are believed to be disclosed or suggested by Markman (i.e., ¶[0025], ¶[0041], ¶[0048] and ¶[0085]).

Moreover, Zhang fails to overcome the deficiencies noted above in Markman. Zhang in col. 9, lines 10-50 discloses a process for downloading and displaying a video program using a mobile terminal in an interworking environment. As described in Zhang (i.e., col. 9, lines 10-50), a first radio access network has a first data transfer rate and a second radio access network has a second data transfer rate that is faster than the first data transfer rate.

Although Zhang (i.e., col. 9, lines 10-50) discloses radio access networks with different transfer data rates, Zhang fails to disclose that each segmented piece of the content has a data amount adjusted based on transmission speed, as recited in independent claims 1 and 8.

Naruse and Zhu are not relied on for disclosing the features of the plurality of communication units. Thus, based on the above discussion, no combination of Naruse, Markman, Zhu and Zhang would not result in, or otherwise render obvious, the features of independent claims 1 and 8 (as amended). Likewise, no combination of Naruse, Markman, Zhu and Zhang would result in, or otherwise render obvious, the features of claim 10 at least by

virtue of its dependencies from independent claim 8.

In the Office Action, claims 2-4, 7, 9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse in view of Markman, Zhu and Zhang, and further in view of Ji (U.S. Publication No. 2005/0043999, hereafter "Ji").

Claims 2-4 depend from independent claim 1. As noted above, Naruse, Markman, Zhu and Zhang fail to disclose or suggest all the features recited in independent claim 1 (as amended). Moreover, Ji fails to overcome the deficiencies noted above in Naruse, Markman, Zhu and Zhang. Accordingly, no combination of Naruse, Markman, Zhu and Zhang with Ji would result in, or otherwise render obvious, claims 2-4 at least by virtue of their dependencies from independent claim 1.

With regard to independent claims 7 and 9, the Applicants have amended independent claims 7 and 9 to more clearly distinguish the present invention from the cited prior art. For example, independent claim 7 (as amended) recites the following features:

"…segments the content accumulated in said content accumulation unit into pieces of segmented data, each of the pieces of segmented data having a data amount adjusted based on a transmission speed which enables communication, each of the pieces of segmented data having a data amount adjusted based on a transmission speed which enables communication…." Similar amendments have been made to independent claim 9.

In the Office Action, the Examiner relies on the combination of Naruse, Markman, Zhu, Zhang and Ji for disclosing or suggesting all the features recited in independent claims 7 and 9. However, with the regard to the features noted above in independent claim 7 (and similarly recited in independent claim 9), it appears that the Examiner relies specifically on Naruse (i.e., ¶[0034]) for disclosing the features of the content segmentation unit and step, recited respectively in independent claims 7 and 9.

However, the Applicants asset that Naruse (i.e., ¶[0034]) fails to disclose or suggest all the features recited in independent claims 7 and 9, as amended.

Naruse in ¶[0034] discloses a data transmission unit that forms transmission data and transmits it to a mobile wireless terminal via a communication path. The transmission data is formed by adding an error correction code to coded data, packetizing the coded data and modulating it to form the transmission data.

As noted above, Naruse (i.e., ¶[0034]) only discloses forming transmission data by adding an error correction code, packetizing the coded data and modulating it. Nothing in Naruse (i.e., ¶[0034]) discloses that each piece of segmented data has a data amount adjusted based on a transmission speed which enables communication, as recited in independent claims 7 and 9.

Moreover, of Markman, Zhu, Zhang, and Ji fail to overcome the deficiencies noted above in Naruse. Accordingly, no combination of Naruse with Markman, Zhu, Zhang, and Ji would result in, or otherwise render obvious, the features of independent claims 7 and 9 (as amended). Likewise, no combination of Naruse with Markman, Zhu, Zhang, and Ji would result in, or otherwise render obvious, claim 11 at least by virtue of its dependency from independent claim 9.

In the Office Action, claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse in view of Markman, Zhu and Zhang, and further in view of Takamura (U.S. Publication No. 2004/0045027, hereafter "Takamura").

Claims 5 and 6 depend (directly or indirectly) from independent claim 1. As noted above, Naruse, Markman, Zhu and Zhang fail to disclose or suggest all the features recited in independent claim 1 (as amended). Moreover, Takamura fails to overcome the deficiencies noted above in Naruse, Markman, Zhu and Zhang. Accordingly, no combination of Naruse, Markman, Zhu and Zhang with Takamura would result in or otherwise render obvious claims 5 and 6 at least by virtue of their dependencies from independent claim 1.

In the Office Action, claims 12, 14 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse in view of Markman, Zhang and Ji, and further in view of Uhlik (U.S. Publication No. 2007/0112948, hereafter "Uhlik"); claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse in view of Markman, Zhang, Ji and Uhlik, and further in view of Zhu; and claims 16 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruse in view of Markman, Zhang, Ji and Uhlik, and further in view of Takamura.

The Applicants have amended independent claim 12 to more clearly distinguish the present invention from the cited prior art. Independent claim 12 has been amended similar to independent claim 1. That is, independent claim 12 has been amended to recite the following:

"…a plurality of communication units that receive, in parallel, each of pieces of segmented data of a content transmitted from a content transmission device over a

communication path, a part of the pieces of the segmented data of the content being received by one of said plurality of communication units and another part of the pieces of the segmented data of the content being received by another one of said plurality of communication units, each of the pieces of segmented data having a data amount adjusted based on a transmission speed which enables communication…." Emphasis added.

In the Office Action, the Examiner relies on the combination of Naruse, Markman, Zhang, Ji and Uhlik for disclosing or suggesting all the features of independent claim 12. However, with the regard to the features noted above in independent claim 12 (and similarly recited in independent claim 8), it appears that the Examiner relies specifically on Markman in ¶[0025], ¶[0041], ¶[0048] and ¶[0085] and Zhang in col. 9, lines 10-59 for disclosing the features of the plurality of communication units, recited in independent claim 12.

As noted above, independent claim 12 has been amended similar to independent claim 1. Accordingly, independent claim 12 is believed to be distinguished from Markman in ¶[0025], ¶[0041], ¶[0048] and ¶[0085] and Zhang in col. 9, lines 10-59 for similar reasons noted for independent claim 1. Moreover, Ji and Uhlik fail to overcome the deficiencies noted in Markman and Zhang. Accordingly, no combination of Naruse, Markman, Zhang, Ji and Uhlik would result in, or otherwise render obvious, the features of independent claim 12.

Claims 13-17 depend from independent claim 12. As noted above, Naruse, Markman, Zhang, Ji and Uhlik fail to disclose or suggest all the features recited in independent claim 12. Also, Zhu and Takamura fail to overcome the deficiencies noted above in Naruse, Markman, Zhang, Ji and Uhlik. Accordingly, no combination of Naruse, Markman, Zhang, Ji, and Uhlik; or Naruse, Markman, Zhang, Ji, and Uhlik with Takamura would result in, or otherwise render obvious, claims 13-17 at least by virtue of their dependencies from independent claim 12.

V. Conclusion

In light of the above, the Applicants submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any issues remaining in the application.

Respectfully submitted,

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